

Financial Analysis - Potential Share, Price, Revenue

Original Market Analysis based on Market share

	2003	2004	2005	2006	2007	2008	2009	2010
Total Market (Metric Tonnes)	8,000	10,000	12,000	14,000	15,000	16,000	16,000	16,000
GCI Attainable Share	0%	40%	40%	40%	40%	40%	40%	40%
Sales Ramp	0%	30%	50%	90%	100%	100%	100%	100%
GCI Share	0%	12%	20%	36%	40%	40%	40%	40%
Estimated Sales (Metric Tonnes)	0	1,200	2,400	5,040	6,000	6,400	6,400	6,400
Average Price (\$/kg)	\$3.00	\$2.50	\$2.25	\$2.03	\$1.82	\$1.73	\$1.64	\$1.56
GCI Sales Revenue (\$MM)	\$0.0	\$3.0	\$5.4	\$10.2	\$10.9	\$11.1	\$10.5	\$10.0
Contract Revenue (\$MM)								
Royalties (\$MM)								
Total Revenue (\$MM)	\$0.0	\$3.0	\$5.4	\$10.2	\$10.9	\$11.1	\$10.5	\$10.0

Revised Market Analysis based on profitability

	2003	2004	2005	2006	2007	2008	2009	2010
Total Market (Metric Tonnes)	8,000	10,000	12,000	14,000	15,000	16,000	16,000	16,000
GCI Attainable Share	0%	25%	25%	25%	25%	25%	25%	25%
Sales Ramp	0%	30%	60%	100%	100%	100%	100%	100%
GCI Share	0%	8%	15%	25%	25%	25%	25%	25%
Estimated Sales (Metric Tonnes)	0	750	1,800	3,500	3,750	4,000	4,000	4,000
Average Price (\$/kg)	\$3.00	\$2.80	\$2.74	\$2.69	\$2.64	\$2.58	\$2.53	\$2.48
GCI Sales Revenue (\$MM)	\$0.0	\$2.1	\$4.9	\$9.4	\$9.9	\$10.3	\$10.1	\$9.9
Contract Revenue (\$MM)								
Royalties (\$MM)								
Total Revenue (\$MM)	\$0.0	\$2.1	\$4.9	\$9.4	\$9.9	\$10.3	\$10.1	\$9.9



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Marketing/Sales Objectives

Sales Objectives

1. To gain a stronghold within customers who are or were using G997 and had to switch to FRED or HPA and are not that comfortable with those products.
2. To supply EB2 to those additional customers who particularly value its benefits beyond Novozymes SC, whether due to GCOR or EDC relationship, technical service, or actual product performance.
3. To stabilize AA prices to the ethanol industry.



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Marketing/Sales Strategies

Product Packaging (MSDS, Kosher letter, spec sheet, etc.)

- MSDS and Kosher letters are being dealt with appropriately.
- Initial product spec sheet being drafted.
- J code has been assigned to experimental material from PA.
- Product specs should be similar to G997. Formulation may be similar to FRED due to stability reasons.
- Product information sheet is being generated in Apps Lab (Beloit)

Pricing vs. Competitors

- Dictated by market conditions and how aggressively we want share.
- Introductory price in the \$2.80 - 3.50/kg range.
- Could get many plant trials.
- SC price could drop 30% or more.



CONFIDENTIAL

Genencor International, Inc.* Innovative by Nature™

EB2 Analysis - Marketing/Sales Strategies

Cost (Production), Margins, etc.

- No concrete cost projections from manufacturing.
- Best guess based on technical assumptions is \$1.10-1.30/kg.
- Depending on process optimization, could be as low as \$1.00/kg.
- Margins could be in the range of 30-60%.

Product Features and Benefits

- EB2 is an engineered *B. stear.* designed for quick viscosity break in higher %ds systems.
- Similar to SC. Used in lower pH liquefactions with no calcium additions.
- Defining additional features and benefits.

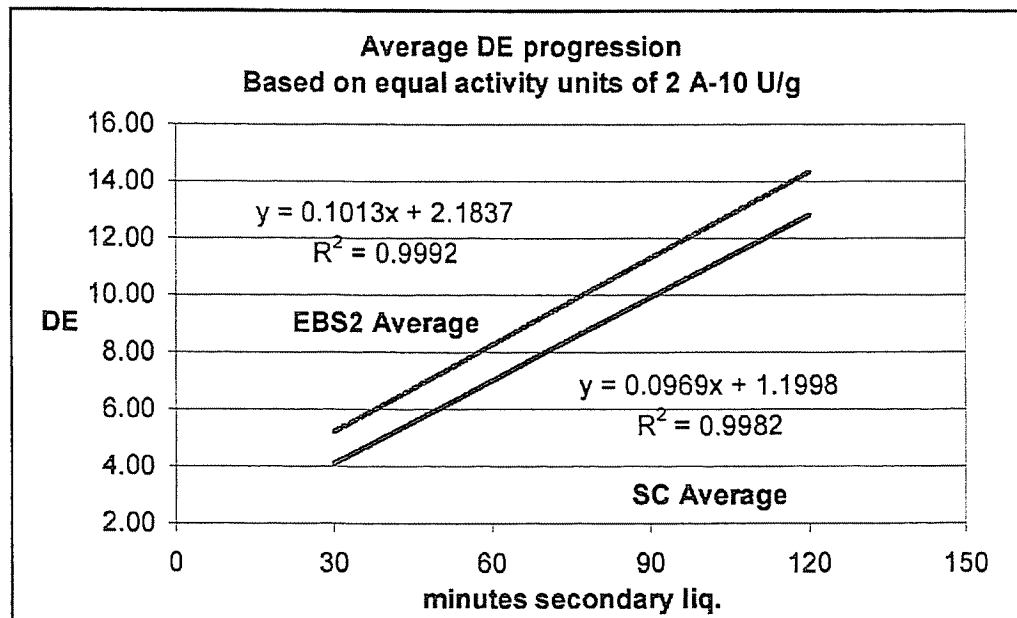


CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Features and Benefits

- Run on corn starch, 35% ds, pH 5.5, 20 ppm Ca+2, 100 ppm SO2

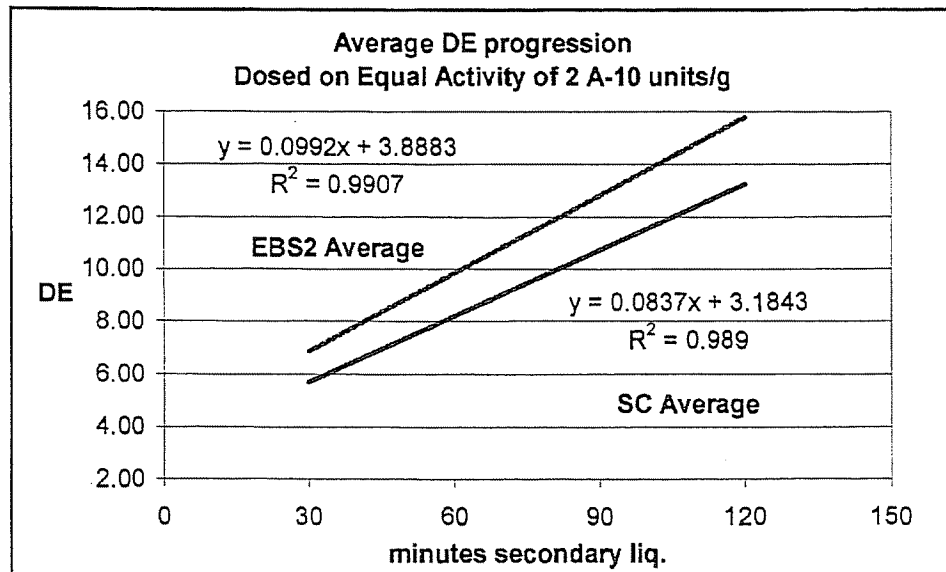


CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Features and Benefits

- Run on corn starch, 35% ds, pH 5.5, 20 ppm Ca+2, 100 ppm SO2



CONFIDENTIAL

Geneacor International, Inc.® Innovative by Nature™

EB2 Analysis - Features and Benefits

- Experiments have been consistent from the beginning.
- EB2 performed better than SC on terms of equal activity. This is on starch only.
- Plants run on equal weight or volume.
- Previous SC activity units were 6,000-6,500 A-10 units/g.
- NZ may have increased units to 7,000 U/g.
- Our spec for EB2 will be in the 6,000-6,500 U/g. Our sample from PA was 5,700 U/g.
- We ran another set of experiments based on equal weight.

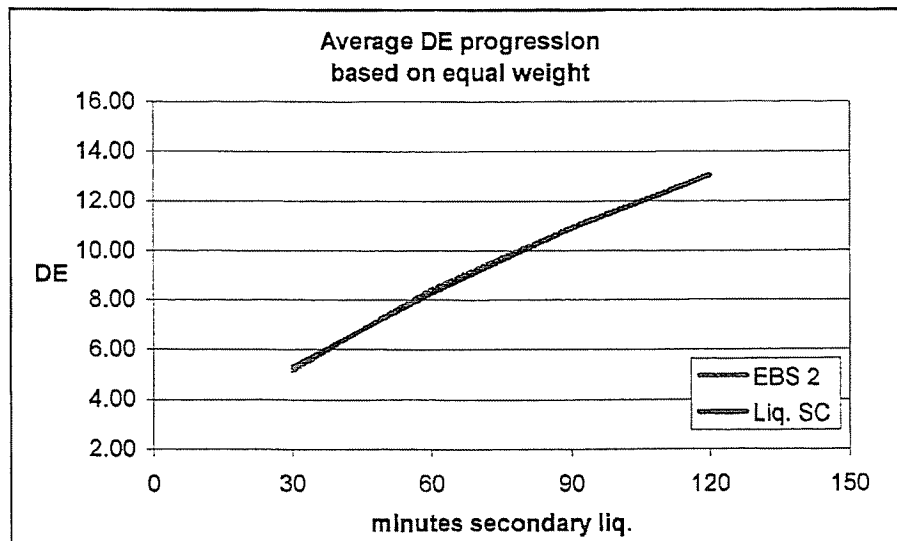


CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Features and Benefits

- Run on corn starch, 35% ds, pH 5.5, 20 ppm Ca+2, 100 ppm SO₂. Dose based on equal weight.



SC was dosed at 2.0 A-10 U/g, EBS 2 was dosed at 1.54 U/g or 0.77X of SC
SC activity = 7408 U/g
EBS2 activity = 5714 U/g



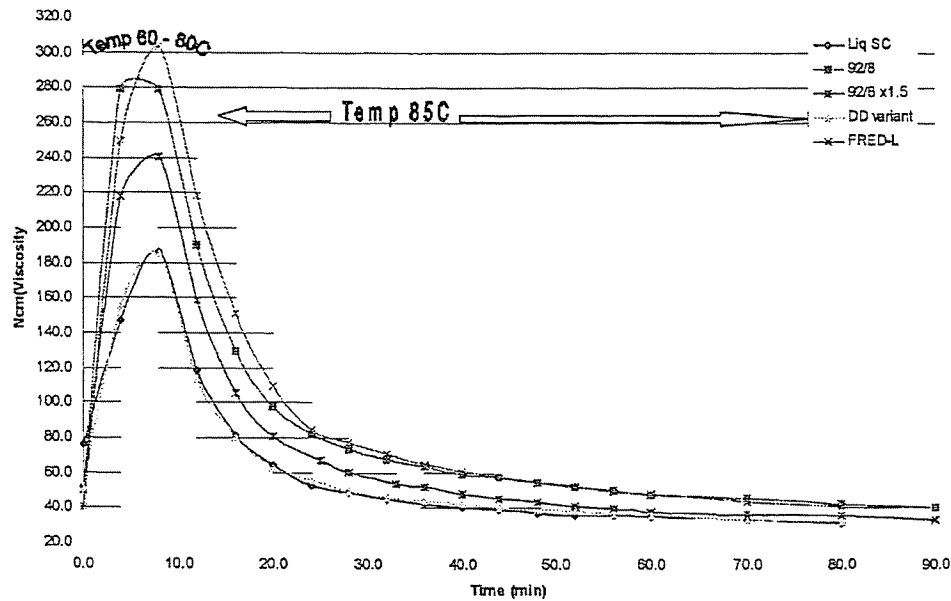
CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Features and Benefits

- Run on corn mash, 35% ds, pH 5.5

Slurry Viscosity progression



CONFIDENTIAL

Geneacor International, Inc.™ Innovative by Nature™

EB2 Analysis - Features and Benefits

Summary

- Looks like we are better in terms of DE development by 20% based on starch.
- Viscosity is on par with SC on corn mash.
- Further applications testing is required to determine how we compete with SC.
- Initial work was done to quickly compare what we had from R&D and how it compared to SC.
- First batches characteristic of product to market were received in Dec 2003.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Features and Benefits

Future Applications Plans and Focus:

- pH and temperature optimums and extremes.
- Viscosity comparisons using starch and thin stillage.
- Viscosity comparisons using corn and wheat mash at various solids levels.
- Fermentations after liquefactions to compare any differences between EB2, SC and FRED.
- Any other fields?? Sweeteners? Need to verify and plan for these possibilities.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Trail Distribution (Part 1):

- Two totes made by PA for customer testing.
- Testing will be at AGP and Corn Plus.
- Goal is to get most information and extension of current contracts.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Trail Distribution (Part 2):

- AOP list for 2004.
- Scenarios for market entry



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

		Data	Desc
Current Ship Cust Headquarters Name	Current Ship Cust Report Name	Revenues	Sum of Total Invoice Quantity
ABENGOA BIOENERGY	HIGH PLAINS	2004 ACP	2004 ACP
	High Plains Corp.	\$50,000	20000
ABENGOA BIOENERGY Total		\$100,000	40000
ACE ETHANOL LLC	Ace Ethanol LLC	\$150,000	60000
ACE ETHANOL LLC Total		\$50,000	20000
AGRI ENERGY	Agri Energy	\$50,000	20000
AGRI ENERGY Total		\$50,000	20000
BROIN GROUP	Dakota Ethanol LLC	\$50,000	20000
	Ethanol 2000 L.L.P.	\$50,000	20000
	EXOL	\$50,000	20000
	Great Plains Ethanol	\$50,000	20000
	James Valley Ethanol, LLC	\$50,000	20000
	Michigan Ethanol, LLC	\$50,000	20000
	Northern Lights Ethanol	\$50,000	20000
	Pro Corn LLC	\$50,000	20000
	Tall Corn Ethanol	\$50,000	20000
BROIN GROUP Total		\$450,000	180000
CORN PRODUCTS INTERNATIONAL	Canaca Colors & Chemicals	\$199,584	64800
CORN PRODUCTS INTERNATIONAL Total		\$199,584	64800
ENZYME DEVELOPMENT CORPORATION	Badger State Ethanol	\$50,000	20000
	Central Minnesota Ethanol	\$50,000	20000
	CHIEF ETHANOL FUELS	\$500,000	320000
	Golden Triangle Energy	\$50,000	20000
	Grain Processing Corporation	\$50,000	20000
	HEARTLAND GRAIN FUELS	\$100,000	40000
	Midwest Grain Processors	\$50,000	20000
	MIDWEST GRAIN PRODUCTS	\$200,000	80000
	Minnesota Energy	\$50,000	20000
	QUAD COUNTY CORN	\$50,000	20000
	Siouxland Energy & Livestock Cooperative	\$50,000	20000
	US ENERGY PARTNERS LLC	\$50,000	20000
ENZYME DEVELOPMENT CORPORATION Total		\$1,550,000	620000
GRAIN PROCESSING CORPORATION	Grain Processing Corporation	\$50,000	20000
GRAIN PROCESSING CORPORATION Total		\$50,000	20000
NEW ENERGY CORPORATION	New Energy Corporation	\$150,000	60000
NEW ENERGY CORPORATION Total		\$150,000	60000
RENEWABLE PRODUCTS BUYING GROUP	Al-Corn Clean Fuel	\$50,000	20000
	Chippewa Valley Ethanol Co.	\$50,000	20000
	Corn Plus	\$50,000	20000
	DENCO, LLC (Diversified Energy Company)	\$50,000	20000
	Heartland Corn Products	\$50,000	20000
RENEWABLE PRODUCTS BUYING GROUP Total		\$250,000	100000
VERA SUN ENERGY	VERA SUN ENERGY	\$100,000	40000
VERA SUN ENERGY Total		\$100,000	40000
WYOMING ETHANOL	Wyoming Ethanol	\$50,000	20000
WYOMING ETHANOL Total		\$50,000	20000
Grand Total		\$3,049,584	1204800



CONFIDENTIAL

Genencor International, Inc. "Innovative by Nature™"

EB2 Analysis - Trial Distribution and Market Entry

Trail Distribution (Part 2):

- AOP list for 2004.
- Price for exercise was \$2.50/kg. CPI price was \$3.08/kg.
- Approximately \$3.0 million in sales.
- Driving forces were increased market share and revenue growth.
- However, new direction on margin contribution and profitability.
- Three different scenarios.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature®

EB2 Analysis - Trial Distribution and Market Entry

Scenario 1 - Shock and Awe

- Blitz entire market and take market share from NZ.
- Require large efforts from sales, marketing, and technical service.
- Could get extended trials at most customers. New product excitement.
- Could easily make 2004 AOP, but at what cost.
- NZ would most certainly price slash to keep share.
- NZ retaliation could be great at other GCOR accounts.



CONFIDENTIAL

Genencor International, Inc. "Innovative by Nature"

EB2 Analysis - Trial Distribution and Market Entry

Scenario 1 - Shock and Awe (Example)

- Assuming a non-captive AA market of \$24,000,000 to the ethanol industry (at present we have \$5,000,000 in revenues to this market).
- If we were to pursue this scenario, we could theoretically take 17% (1 truck to each plant @ \$3.00/kg) of the market in 2004, or \$4,000,000 in EB2 trials (in addition to the \$5,000,000), for a total of \$9,000,000 GCOR AA revenues.
- This would represent 38% market share, with good margins. However, the expected NZ reaction would reduce the market by 30-40% and result in the total ethanol AA market contracting to \$14 to \$16 million. .



CONFIDENTIAL

Genescor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 2 - Pick and Choose Carefully (Cherry Pick)

- Not an all out attack, but a chip away strategy designed for sustained sales and increased profitability.

Example #1 - Customers who are currently using G997.

- Margin would change from -24% to 60%. No brainer.
- Some customers may require food grade or country specific regulatory approval.(CPI- Cardinal)



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 2 - Pick and Choose Carefully (Cherry Pick)

Chief - Was using G997, switched to SPEZYME HPA. Full year estimates make more sense to keep them on HPA than to switch to EBS2. The gross margin would be more with EBS2 but you have to take into consideration the dose and we actually would make more money by using HPA.

Currently using 42,000 kg/mo @ 2.00/kg = \$84,000/mo x 12 = \$1,008,000
@ 52.5% margin = \$529,000

If switched to EBS2 use would be 21,000/kg @ 3.00/kg = \$63,000 X12 = \$756,000 @ 60% margin = \$453,600

If switched to EBS2 use would be 31,000/kg @ 3.00/kg = \$93,000 X12 = \$1,116,000 @ 60% margin = \$669,600

If switched to EBS2 use would be 21,000/kg @ 3.50/kg = \$93,000 X12 = \$882,000 @ 60% margin = \$529,000

What we will need to do is run trials to determine the dose needed at these plants and price accordingly considering the highest gross margin.



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 2 - Pick and Choose Carefully (Cherry Pick)

- Not an all out attack, but a chip away strategy designed for sustained sales and increased profitability.

Example #2 - Customers who have no strong ties to NZ and could be easier to pick off. Customers who may have a higher price than larger or contracted NZ customers.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 3 - Trade GA business for AA sales at existing customers

- Would increase overall margin based on trading low margin GA \$, for higher margin AA \$.



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 3 - Trade GA business for AA sales at existing customers

Cost	1.91	Cost	1.2
G-ZYME 480 price	2.35	EB2 price	2.65

Sales \$ (millions)	Gross Margin	Profit	Sales \$ (millions)	Gross Margin	Profit	Total of both markets
\$0	19%	\$0	\$5,000,000	55%	\$2,735,849	\$2,735,849
\$500,000	19%	\$93,617	\$4,500,000	55%	\$2,462,264	\$2,555,881
\$1,000,000	19%	\$187,234	\$4,000,000	55%	\$2,188,679	\$2,375,913
\$1,500,000	19%	\$280,851	\$3,500,000	55%	\$1,915,094	\$2,195,945
\$2,000,000	19%	\$374,468	\$3,000,000	55%	\$1,641,509	\$2,015,978
\$2,500,000	19%	\$468,085	\$2,500,000	55%	\$1,367,925	\$1,836,010
\$3,000,000	19%	\$561,702	\$2,000,000	55%	\$1,094,340	\$1,656,042
\$3,500,000	19%	\$655,319	\$1,500,000	55%	\$820,755	\$1,476,074
\$4,000,000	19%	\$748,936	\$1,000,000	55%	\$547,170	\$1,296,106
\$4,500,000	19%	\$842,553	\$500,000	55%	\$273,585	\$1,116,138
\$5,000,000	19%	\$936,170	\$0	55%	\$0	\$936,170



CONFIDENTIAL

Genencor International, Inc. Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Scenario 3 - Trade GA business for AA sales at existing customers

- Broin business would likely be harder to obtain. NZ reaction could be to lower GA price to them.
- This scenario could be attractive to other customers with lower overall sales than Broin. (e.g. New Energy, RPB6)



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Summary of Scenarios:

- Scenario #1 is an interesting option, but doesn't make much sense over the long term. This would not allow us to increase profitability and increase margin contribution.
- Scenarios #2 and 3 offer us the best opportunity to play in this market, take some share from NZ, and hopefully stabilize AA prices.



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

Timing:

- Tote and bulk quantities available for testing in May.
- Customer list and timelines.



CONFIDENTIAL

Genencor International, Inc.™ Innovative by Nature™

EB2 Analysis - Trial Distribution and Market Entry

- Customer spreadsheet



CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature®

EB2 Analysis - Trial Distribution and Market Entry

New Technology or EB2 derivatives

- Line extensions could be increased activity or whole cell material. Differentiated product from SC.
- Calcium requirements - formulation or additional R&D effort.
- Blending of EB2 and other enzymes. Product differentiation. Need to determine which activities may work well with each other.




CONFIDENTIAL

Genencor International, Inc.® Innovative by Nature™

A-72 – A-109

REDACTED IN THEIR ENTIRETY



Unlocking the
Magic of nature

Products & Solutions Customer Centre Sustainability Investor Press & Publications Our Science Careers About Us

Welcome to the new
novozymes.com

Novozymes is the biotech-based world leader in
enzymes and microorganisms. Explore our new
and revitalized website to find out why.

Quick access to our solutions
With an easy access guide, a brush up of our
product presentation, and a new design we hope
that you will explore our new product site ...

Log-in for Customer Centre

User Name

Password

☐ Remember me

Login

Get e-mail

► Free e-newsletter
► Free e-newsletter
► Free e-newsletter

Guides to Novozymes.com

We have provided you with a special guide across
novozymes.com - see if you can find your profile

Choose your guide

► Teacher
► Parent
► Student

July 19 2006

Novozymes' funds US pulse
Novozymes has been awarded a US\$100 million
contract to develop a new enzyme which
can reduce the cost of

July 10 2006

Great interest in Novozymes'
anti-corruption work

July 06 2006

Celiance Enters Agreement
with Novozymes AS to
Develop Animal-Free
Recombinant human
Albumin

June 12 2006

Innovation: Novozymes
develops global standard for
logistics

Sustainability
development

Wastewater
treatment

Enzymes
Latest Issue